

ABSTRACT

A method for abatement of volatile organic compounds (VOC) in an exhaust gas stream is disclosed. That method comprises passing an exhaust gas stream (40) through a pulsed corona discharge chamber (10) in the presence of flowing water (30) to form one or more oxidation products that dissolve in the water and provide an effluent water stream (42) containing the oxidized VOC and an effluent gas stream (32) having a deleted amount of VOC. The pulsed corona discharges at a rate of about 0.01 to about 2 kHz. The ratio of the water spray rate to the exhaust gas flow is about 0.2 milliliters/minute at one standard liter per minute of exhaust gas flow, and an expenditure of not more than 50 eV per molecule of VOC is utilized. The method provides a destruction and removal efficiency of about 90 percent or more.